GOVERNMENT OF INDIA
WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION
LOK SABHA

STARRED QUESTION NO:380
ANSWERED ON:11.08.2016
Availability of water
Gaikwad Prof. Ravindra Vishwanath;Yadav Shri Jay Prakash Narayan

Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION be pleased to state:

(a) the annual per capita availability of water in the country at present vis-a-vis international norms prescribed for the purpose;
(b) the average use of groundwater in the country particularly Punjab, Haryana, Delhi and Rajasthan;
(c) whether poor monsoon and excessive use of groundwater during the last two years has contributed towards scarcity of water in the country and if so, the details and facts thereof;
(d) the steps taken to overcome the issue of scarcity of water; and
(e) the plan of the Government for development of alternative sources of water apart from underground water sources?

Answer

THE MINISTER OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION
(SUSHRI UMA BHARTI)

(a) to (e) A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION No.*380 TO BE ANSWERED IN LOK SABHA ON 11.08.2016 REGARDING AVAILABILITY OF WATER

(a) The average annual per capita availability of water in the country taking into consideration the population of the country as per the 2011 census is 1545 cubic metres /year.

According to Falkenmark Water Stress Indicator, annual per-capita water availability of less than 1700 cubic metres is considered as water stressed condition, whereas annual per-capita water availability below 1000 cubic metres is considered as water scarcity condition.

(b) As per the latest assessment of ground water resources (2011), jointly carried out by Central Ground Water Board (CGWB) and State Governments, the total use of ground water in the country is 245 Billion Cubic Meter (BCM). The ground water use in the States of Punjab, Haryana, Delhi and Rajasthan is 35 BCM, 13 BCM, 0.39 BCM and 15 BCM respectively. State-wise details of ground water availability, utilization are given at Annexure-I

(c) As per the information of the Indian Metrological Department (IMD), rain fall deficit (with respect to Long Period Average) in country as a whole during monsoon 2014 and 2015 was 12% and 14% respectively. Deficit rainfall in turn caused less storage in the reservoirs. During 2015-16, drought was declared by a few States namely Karnataka (for both Kharif and Rabi crops), Chhattisgarh, Maharashtra, Madhya Pradesh, Odisha, Telangana, Uttar Pradesh (for both Kharif and Rabi crops), Andhra Pradesh, Jharkhand and Rajasthan. Gujarat has also declared some areas as water scarcity and some other states have also experienced low rainfall and water scarcity

As per the ground water level data monitored by CGWB, Pre-monsoon (April/May, 2016) water level data when compared with the decadal average (2006-2015) indicates that 65% of the wells have registered decline in ground water level, mostly in the range of 0-2 meters, in almost all the States/UTs, except a few namely Arunachal Pradesh, Goa, Pondicherry, Tamil Nadu and Tripura. The tabular statement of State-wise details is given at Annexure II.

(d) Water being a State subject, steps for augmentation, conservation and efficient management to ensure sustainability of water resources are undertaken by the respective State Governments. Central Government provides Central Assistance to the State Governments through various schemes/programmes such as Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and its components like Accelerated Irrigation Benefits Programme (AIBP); Repair, Renovation and Restoration of Water Bodies, etc.

Steps/measures taken by the Central Government to improve the situation include:

â€¢ "Master Plan for Artificial Recharge to Ground Water in India" has been prepared, which envisages construction of different types of Artificial Recharge and Rainwater Harvesting structures in the country. The Master Plan has been circulated to all State Governments for implementation.
â€¢ To increase availability of drinking water, the Ministry of Drinking Water & Sanitation has suggested all States to adopt water conservation measures like roof top rainwater harvesting, erecting sustainability structures for water conservation etc. For creating

such sustainability structures, 10% of National Rural Drinking Water Programme (NRDWP) fund is provided to the States.

â€¢ CGWB has undertaken the Demonstrative Rain Water Harvesting and Artificial Recharge Projects in XI Plan under the scheme of "Ground Water Management & Regulation", in priority areas.

â€¢ CGWB has taken up Aquifer Mapping and Management programme during XII Plan, under the scheme of Ground Water Management and Regulation. As on March 2016, mapping of 2.28 lakh sq.km area has been achieved.

â€¢ The Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for its regulation and development which includes provision of rain water harvesting. So far, 15 States have adopted and enacted suitable legislations on the line of Model Bill.

â€¢ This Ministry has also launched 'Jal Kranti Abhiyan' (2015-16 to 2017-18) in order to consolidate water conservation and management in the country through a holistic and integrated approach involving all stakeholders, making it a mass movement. 'Jal Gram Yojana' component of 'Jal Kranti Abhiyan' envisages selection of two villages in every district, preferably 'over-exploited' or facing acute water scarcity, as 'Jal Grams' to ensure optimum and sustainable utilization of water.

â€¢ The National Water Mission (NWM) has been set up for "conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management".

(e) Artificial recharge of ground water to increase the ground water potential, inter-basin water transfers wherever feasible, recycling and reuse of water, desalination of saline water, water harvesting, watershed development and revival of traditional water storage structures are some of the strategies for enhancing the utilizable water.

The Government of India has formulated a National Perspective Plan for Water Resources Development which envisages transfer of water from surplus basins to water deficit basins. The inter-basin transfer proposals envisage additional utilization of available water to bring additional area under irrigation. NWDA has identified 30 links (16 under Peninsular Component & 14 under Himalayan Component) for preparation of Feasibility Reports. After survey and investigations feasibility Reports of 14 links under Peninsular Component and two links in the Himalayan components have been prepared. The DPRs of Ken-Betwa Phase I & II, Daman-Ganga-Pinjal, Par-Tapi-Narmada have been prepared and shared with the States. Pre-Feasibility Reports of 36 Intra-State link proposals out of 46 proposals of Intra-State links have been completed.
These DPRs are at various stages of approval. The in-principle approval of the Standing Committee of the National Wild Life Board has been received for the Ken-Betwa link Project. In order to speed up the implementation of Inter-Linking of River Programme and to arrive at a consensus on the link proposals between the States, a 'Special Committee for Interlinking of Rivers', has been constituted by this Ministry in September, 2014. Ten meetings of the Special Committee for Interlinking of Rivers (ILR) have been held so far, wherein State Irrigation/ Water Resources Ministers along with the Secretaries of various States attended the meetings. The Committee after considering the views of all the stakeholders is taking all necessary steps for expediting the objectives of interlinking rivers programme as per terms of reference of the Committee.

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ANNEXURE −I

Annexure referred in reply to part 'b'of Lok Sabha Starred Question No. *380 for 11.08.2016 regarding "Availability of Water"

STATE-WISE GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT
(As on March 2011)
(unit in BCM/yr)
Sl. No. States / Union Territories Annual Replenishable Ground Water Resource Natural Discharge during non-monsoon season Net Annual Ground Water Availability Annual Ground Water Draft Stage of Ground Water Development (exploitation in %)
Irrigation Domestic and industrial uses Total

1 2 3. 4. 5. 6. 7. 8. 9.
States
1 Andhra Pradesh 20.7892 1.9064 18.8828 6.2694 0.7381 7.0075 37
2 Telangana 15.098 1.4138 13.6844 6.9103 0.5919 7.502 55
3 Arunachal Pradesh 4.5100 0.4500 4.0600 0.0020 0.0010 0.0030 0.08
4 Assam 28.5200 2.7300 25.7900 2.8600 0.6400 3.4900 14
5 Bihar 29.3350 2.4705 26.8645 10.2550 1.6960 11.9509 44
6 Chhattisgarh 12.4200 0.7900 11.6300 3.4300 0.6200 4.0500 35
7 Delhi 0.3105 0.0234 0.2871 0.1402 0.2519 0.3922 137
8 Goa 0.2424 0.0970 0.1454 0.0101 0.0311 0.0411 28
9 Gujarat 18.5686 0.9832 17.5854 10.7477 1.1074 11.8551 67
10 Haryana 10.7800 0.9900 9.7900 12.3500 0.7100 13.0500 133
11 Himachal Pradesh 0.5590 0.0280 0.5311 0.2506 0.1272 0.3778 71
12 Jammu & Kashmir 4.2512 0.4251 3.8261 0.1988 0.6077 0.8065 21
13 Jharkhand 6.3100 0.5500 5.7600 1.3100 0.5500 1.8600 32
14 Karnataka 17.0266 2.2154 14.8112 8.5916 0.8198 9.4114 64

15 Kerala 6.6864 0.6134 6.0730 1.3046 1.5310 2.8355 47
16 Madhya Pradesh 35.0406 1.7520 33.2886 17.4809 1.3527 18.8335 57
17 Maharashtra 33.9474 1.7955 32.1519 16.1460 1.0293 17.1754 53
18 Manipur 0.4401 0.0440 0.3961 0.0033 0.0007 0.0040 1.02
19 Meghalaya 1.7805 0.1780 1.6024 0.0015 0.0002 0.0017 0.08
20 Mizoram 0.0304 0.0030 0.0273 0.0000 0.0010 0.0010 3.52
21 Nagaland 0.6159 0.0616 0.5543 0.0000 0.0340 0.0340 6.13
22 Odisha 17.7768 1.0859 16.6909 3.8126 0.9162 4.7288 28
23 Punjab 22.5300 2.2100 20.3200 34.1700 0.7100 34.8800 172
24 Rajasthan 11.9414 1.1125 10.8290 13.1332 1.7098 14.8430 137
25 Sikkim* - - 0.0442 0.0027 0.0086 0.0113 26
26 Tamil Nadu 21.5326 2.1533 19.3793 13.1688 1.7638 14.9326 77
27 Tripura 2.5866 0.2286 2.3580 0.0932 0.0694 0.1626 7
28 Uttar Pradesh 77.1900 5.5300 71.6600 48.7400 4.0400 52.7800 74
29 Uttarakhand 2.0403 0.0449 1.9954 1.1033 0.0298 1.1331 57
30 West Bengal 29.2511 2.6688 26.5823 9.7195 0.9731 10.6926 40
Total States 432.11 34.55 397.60 222.21 22.66 244.85 62
Union Territories
1 Andaman & Nicobar 0.3080 0.0216 0.2865 0.0006 0.0121 0.0127 4.44
2 Chandigarh 0.0216 0.0022 0.0194 0.0000 0.0000 0.0000 0
3 Dadara& Nagar Haveli 0.0622 0.0031 0.0591 0.0072 0.0056 0.0129 22
4 Daman & Diu 0.0181 0.0012 0.0169 0.0145 0.0019 0.0164 97
5 Lakshdweep 0.0105 0.0070 0.0035 0.0000 0.0023 0.0023 67
6 Puducherry 0.1893 0.0190 0.1703 0.1237 0.0293 0.1530 90
Total Uts 0.6100 0.0500 0.5600 0.1500 0.0500 0.2000 36
Grand Total 432.72 34.60 398.16 222.36 22.71 245.05 62

Annexure II

Annexure referred in reply to part 'c'of Lok Sabha Starred Question No. *380 for 11.08.2016 regarding "Availability of Water"
State-wise Decadal Water Level Fluctuation With Mean [Pre-monsoon (2006 to 2015] and Pre-monsoon 2016

S. No. Name of State No. of wells Analysed Rise Fall Rise Fall
0-2 m 2-4 m >4 m 0-2 m 2-4 m >4 m
No % No % No % No % No % No % No % No %
1 Andhra Pradesh 547 181 33.1 29 5.3 26 4.8 214 39.1 59 10.8 35 6.4 236 43.14 308 56.31
2 Arunachal Pradesh 14 9 64.3 0 0.0 1 7.1 4 28.6 0 0.0 0 0.0 10 71.43 4 28.57
3 Assam 182 72 39.6 10 5.5 2 1.1 85 46.7 9 4.9 4 2.2 84 46.15 98 53.85
4 Bihar 551 166 30.1 10 1.8 4 0.7 313 56.8 48 8.7 8 1.5 180 32.67 369 66.97
5 Chandigarh 11 3 27.3 1 9.1 0 0.0 6 54.5 1 9.1 0 0.0 4 36.36 7 63.64
6 Chhattisgarh 616 111 18.0 34 5.5 20 3.2 313 50.8 98 15.9 40 6.5 165 26.79 451 73.21
7 Dadra & Nagar Haveli 12 4 33.3 2 16.7 0 0.0 3 25.0 2 16.7 1 8.3 6 50.00 6 50.00
8 Daman & Diu 10 2 20.0 0 0.0 0 0.0 4 40.0 4 40.0 0 0.0 2 20.00 8 80.00
9 Delhi 115 19 16.5 4 3.5 3 2.6 52 45.2 19 16.5 18 15.7 26 22.61 89 77.39
10 Goa 70 36 51.4 5 7.1 0 0.0 28 40.0 1 1.4 0 0.0 41 58.57 29 41.43
11 Gujarat 738 171 23.2 63 8.5 20 2.7 284 38.5 99 13.4 92 12.5 254 34.42 475 64.36
12 Haryana 302 97 32.1 10 3.3 4 1.3 117 38.7 44 14.6 30 9.9 111 36.75 191 63.25
13 Himachal Pradesh 95 30 31.6 3 3.2 3 3.2 47 49.5 9 9.5 3 3.2 36 37.89 59 62.11
14 Jammu & Kashmir 225 78 34.7 2 0.9 3 1.3 122 54.2 16 7.1 4 1.8 83 36.89 142 63.11
15 Jharkhand 212 69 32.5 12 5.7 5 2.4 109 51.4 14 6.6 3 1.4 86 40.57 126 59.43
16 Karnataka 1380 319 23.1 56 4.1 40 2.9 596 43.2 221 16.0 132 9.6 415 30.07 949 68.77
17 Kerala 1240 414 33.4 27 2.2 13 1.0 699 56.4 60 4.8 20 1.6 454 36.61 779 62.82
18 Madhya Pradesh 1343 345 25.7 100 7.4 57 4.2 581 43.3 156 11.6 101 7.5 502 37.38 838 62.40
19 Maharashtra 1487 333 22.4 80 5.4 24 1.6 605 40.7 259 17.4 177 11.9 437 29.39 1041 70.01
20 Meghalaya 17 5 29.4 0 0.0 1 5.9 11 64.7 0 0.0 0 0.0 6 35.29 11 64.71
21 Odhisha 1103 345 31.3 45 4.1 5 0.5 636 57.7 61 5.5 8 0.7 395 35.81 705 63.92
22 Pondicherry 6 5 83.3 0 0.0 0 0.0 1 16.7 0 0.0 0 0.0 5 83.33 1 16.67
23 Punjab 238 48 20.2 8 3.4 3 1.3 116 48.7 41 17.2 22 9.2 59 24.79 179 75.21
24 Rajasthan 829 219 26.4 74 8.9 53 6.4 230 27.7 117 14.1 134 16.2 346 41.74 481 58.02
25 Tamil Nadu 587 243 41.4 71 12.1 31 5.3 178 30.3 45 7.7 19 3.2 345 58.77 242 41.23
26 Telangana 377 51 13.5 7 1.9 8 2.1 136 36.1 81 21.5 91 24.1 66 17.51 308 81.70
27 Tripura 28 19 67.9 2 7.1 0 0.0 7 25.0 0 0.0 0 0.0 21 75.00 7 25.00
28 Uttar Pradesh 629 84 13.4 7 1.1 4 0.6 432 68.7 83 13.2 19 3.0 95 15.10 534 84.90
29 Uttarakhand 44 18 40.9 2 4.5 1 2.3 19 43.2 2 4.5 2 4.5 21 47.73 23 52.27
30 West Bengal 899 263 29.3 32 3.6 15 1.7 390 43.4 141 15.7 58 6.5 310 34.48 589 65.52

Total 13907 3759 27.0 696 5.0 346 2.5 6338 45.6 1690 12.2 1021 7.3 4801 34.52 9049 65.07

Note: 0.41% wells are showing no change